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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,602	03/14/2001	Andrew W. Wilson	ADAPP085A2	4955

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EXAMINER

DENNISON, JERRY B

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,602

Applicant(s)

WILSON, ANDREW W.

Examiner

J. Bret Dennison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Application Number 09/809,602 received on 11/21/2005.
2. Claims 1-27 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites, "sending out a next multicast wherein the next multicast includes information regarding the previously registered target when the previously registered target is determined to have re-registered since the multicasting of the signal, the information **regarding the previously registered target notifying other initiators** to maintain the previously registered target on the list of targets." It is unclear if the target is notifying other initiators, or if the multicast includes information that notifies other initiators. Examiner suggests the use of a comma (i.e. "regarding the previously registered target, notifying other initiators...").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 8-13 and 16, 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caronni et al. (U.S. 6,049,878) in view of Satran et al. (U.S. 6,507,586).

4. Regarding claim 1, Caronni disclosed a method for target device discovery on a network, comprising:

multicasting a signal from a master initiator over the network (Caronni, col. 7, lines 6-10);

determining if a previously registered target re-registered with the master initiator by a unicast to the master initiator (Caronni, col. 4, lines 55-57, col. 7, lines 23-40, col. 10, lines 10-13).

Caronni also disclosed a heartbeat message sent to all of the members of the group, heartbeat messages are sent so that devices respond to show that they are still alive and want to continue using the service of the multicast group (Caronni, col. 7, lines 9-40).

Caronni did not explicitly state:

removing the previously registered target on a list of active targets connected to the network when the previously registered target has not re-registered within a selected re-registration interval; and

sending out a next multicast wherein the next multicast includes information regarding the previously registered target when the previously registered target is determined to have re-registered since the multicasting of the signal, the information regarding the previously registered target notifying other initiators to maintain the previously registered target on the list of targets.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the reason for sending out the heartbeat messages to the group is to remove non-active members. If the participant does not respond to the heartbeat message, the participant is not active and would therefore be removed from the group.

In an analogous art, Satran disclosed a broadband multicast transmitter that sends out a group directory, as well as the data in all the groups in the group directory, to update the Group Sending Threads, the group directory being sent out either periodically or at the time of an update (Satran, col. 4, line 50 through col. 5, line 35). Satran also disclosed wherein routers listen to the all-hosts group and update their internal group membership tables according to the IGMP messages they receive (Satran, col. 1, lines 50-55). Since both Carroni and Satran disclosed systems for multicasting groups it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the group key management component

sending out an IMGP message to keep the routers of the system up to date on their internal group membership tables to provide synchronization throughout the network (Caronni, col. 7, lines 20-22).

5. Regarding claim 2, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claim 1, including wherein the other initiators maintain the previously registered target on initiator target lists in response to receiving the information regarding the previously registered target (Caronni, col. 7, lines 55-65).

6. Regarding claim 4, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claim 1, including wherein the signal from the master initiator is in a form of a master identification packet (Caronni, col. 7, lines 5-15, col. 8, lines 1-5).

7. Regarding claim 8, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claim 1, including wherein the sending out occurs on a periodic basis (Caronni, col. 7, lines 10-12).

8. Regarding claims 9, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claim 1, including wherein the network is one of an iSCSI network, an eSCSI network, a TCP/IP network, and an Ethernet network (Caronni, col. 5, lines 20-25, col. 8, lines 1-5, Caronni disclosed using a conventional internet protocol network, which includes TCP/IP).

9. Regarding claim 10, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claim 1, including wherein the previous registered target re-registers by unicasting information to the master initiator on a periodic basis (Caronni, col. 7, lines 5-40).

10. The limitations of claims 11-13 and 16, 20-27 are substantially similar to the limitations of the claims in the above rejection. Therefore claims 11-13 and 16-27 are rejected by the same art as claims 1, 2, and 4-10.

11. Regarding claim 15, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claim 11, including wherein the device identification number is a global unique identification (GUID) number (Caronni, col. 7, line 30).

Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caronni and Satran and in further view of Matsuda et al. (U.S. Patent Application Publication 2002/0133573).

12. Regarding claims 3 and 14, Caronni and Satran disclosed the limitations, substantially as claimed, as described in claims 1 and 11. Caronni and Satran did not explicitly state wherein the master initiator is elected by comparing device identification numbers of a plurality of initiators connected to the network, the master initiator having

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the highest device identification number. In an analogous art, Matsuda disclosed server identification in which the system is capable of managing which server will be designated the master server based on which server has the highest priority (Matsuda, page 5, paragraphs 47 and 48). Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate designating a master server based on priority into the teachings of Caronni and Satran to provide a system in which devices are capable of automatically configuring themselves for network operation when placed in a network environment that lacks designated administrator (Matsuda, page 2, paragraph 15).

Allowable Subject Matter

Claims 5-7, 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5-7, 17-19 recite causing a second initiator in response to receiving a third multicast not including the information regarding the new target, to compare a sequence number of the third multicast with a previous sequence number of a previous multicast, the previous multicast being a most recently received multicast prior to the third multicast which, in addition to the rest of the claim limitations, are distinguished from the prior art.

Response to Amendment

Applicant's arguments and amendments filed on 11/21/2005 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *by incorporating new limitations into the independent claims, which will require further search and consideration*) to the claims which significantly affected the scope thereof.

Applicant's arguments with respect to claims 1-27 have been fully considered but they are not persuasive. Applicant's arguments include the failure of previously applied art to expressly disclose the teachings "multicasting a signal from a master initiator over the network" or "transmitting a plurality of multicasts over the network" or "a master initiator configured to send a multicast throughout the network" [see Applicant's Response, page 13]. It is evident from the mappings found in the above rejection that Caronni disclosed these features (see Caronni, col. 7, lines 5-15, Group creation is accomplished when the group key manager allocates a key management multicast group, the messages sent periodically).

Applicant argues, "Caronni does not mention re-registering by targets" [see Applicant's Response, page 13].]. It is evident from the mappings found in the above rejection that Caronni disclosed participants able to rejoin the multicast group through the group key manager (Caronni, col. 10, lines 9-12).

Applicant argues, "Caronni does not mention a slave initiator, nor does it mention using the multicast to transmit target information "throughout the network"". The

combination of Caronni and Satran disclosed this functionality, with routers, disclosed in Satran, receiving information to update their group membership tables (Satran, col. 1, lines 50-55).

It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Examiner requests Applicant to contact Examiner to discuss the case before further prosecution.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part

of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571) 272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

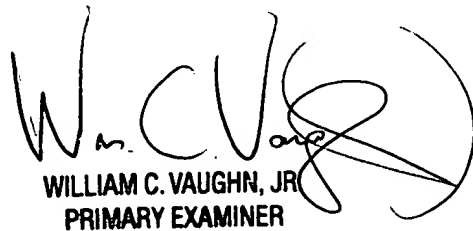
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. B. D.
Patent Examiner
Art Unit 2143



WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER